

D.M.	Month and Date. 1889.	Mag.	Mean R.A. Jan. 1, 1889.			Mean N.P.D. Jan. 1, 1889.
			h	m	s	
+ 10-171	Oct. 3	7	1	17	2.300	79 12 47.22
		7			2.121	47.14
		8			2.166	46.56
		9			2.215	47.84
		10			2.217	46.47
		14			2.175	46.55
		24			2.291	48.32
		25			2.083	47.85
		31			2.222	46.80
+ 16-154	Sept. 16	7.2	1	22	26.012	73 29 42.55
		17			25.922	44.25
		18			25.907	43.26
		20			26.057	43.54
		25			26.085	43.84
	Oct. 3				25.934	44.44
		7			25.965	44.17
		8			25.925	43.86
		9			25.958	44.52
		10			25.989	43.96
		14			26.000	43.74
		24			26.139	44.87
		25			25.873	44.83
		31			26.151	43.56

Observations of the Satellites of Saturn: Conjunctions with the centre of the planet; of Occultations of Stars by the Moon; and of Phenomena of Jupiter's Satellites. Observed at Mr. E. Crossley's Observatory, Bermerside, Halifax, with the 9½-inch Cooke Refractor. Power 240. By J. Gledhill.

1886, January 1.—Very faint. *Enceladus* s. Not up at 8^h 50^m. Up at 8^h 55^m (?) Past at 9^h 5^m (?). Certainly past at 9^h 10^m. G.M.T.

January 18.—*Tethys* s. Not up at 8^h 50^m and 8^h 55^m. Past at 9^h 10^m.

January 26.—*Rhea*. Up at 5^h 50^m (?), 5^h 55^m (?), 6^h (?). Past at 6^h 5^m. *Enceladus* s. Very difficult owing to haze. 10^h 30^m not in line. 10^h 45^m past.

February 2.—*Enceladus* s. Not in line at 6^h 45^m. Clouds passing. Not up at 6^h 50^m. Past at 7^h 5^m.

February 3.—*Tethys* n. Not in line at 10^h. Past at 10^h 9^m. Good definition.

February 4.—Good sky. *Enceladus* not seen. *Rhea* s. On line about 6^h 37^m. *Dione* s. Up at 7^h 49^m. *Tethys* s. Up at 8^h 42^m.

December 2 (with the 3-foot reflector).—*Dione* s. 13^h not in line, nor at 13^h 2^m; probably in line between 13^h 3^m and 13^h 7^m. Past at 13^h 10^m. *Mimas*. Looked long and carefully for *Mimas*; saw it steadily at 13^h 3^m. *Tethys* n. Not up at 13^h 45^m and 13^h 50^m; up between 13^h 53^m, 13^h 57^m. Past at 14^h.

December 4 (3-foot reflector).—*Mimas* not seen. *Tethys* n. Up at 11^h 3^m and past at 11^h 10^m. (Mr. Crossley at telescope.)

December 20.—*Dione* n. Not up at 7^h 40^m, nor at 7^h 42^m. Doubtful from 7^h 45^m to 7^h 47^m. Past at 7^h 50^m (?) Past at 7^h 51^m.

1887, January 12.—*Dione* s. Not in line at 13^h 40^m. Doubtful from 13^h 45^m to 13^h 50^m. Past at 13^h 52^m. Bad sky.

January 26.—*Tethys* n. Not in line at 7^h 5^m. Up from 7^h 10^m to 7^h 15^m. Past at 7^h 17^m. *Dione* s. Not in line before 7^h 50^m. Up between 7^h 55^m and 8^h. Past at 8^h 2^m (?) Past at 8^h 4^m.

January 30.—*Dione* n. Not up at 8^h 20^m. Up between 8^h 27^m and 8^h 33^m. Past at 8^h 35^m.

February 5.—*Rhea* s. Not in line before 9^h 23^m. Probably up between 9^h 25^m and 9^h 30^m. Past at 9^h 33^m.

February 10.—*Dione* n. Up between 6^h 57^m and 7^h 5^m. Past at 7^h 7^m (?). Certainly past at 7^h 10^m. *Tethys* n. Not up at 9^h 27^m. Probably up between 9^h 30^m and 9^h 35^m.

February 11.—*Tethys* s. Not in line at 8^h. In line between 8^h 5^m and 8^h 10^m. Past at 8^h 17^m. The satellite unusually bright. *Enceladus* also was very well seen.

February 12.—*Tethys* n. Not up at 6^h 45^m. Up between 6^h 50^m and 6^h 55^m. Past at 7^h 3^m.

February 14.—*Dione* s. Not on line at 9^h 30^m. Probably so between 9^h 32^m and 9^h 40^m. Past at 9^h 45^m. *Rhea* s. Up between 10^h 10^m and 10^h 15^m. Past at 10^h 20^m.

February 18.—*Dione* n. Not on line at 11^h 50^m. On between 11^h 52^m and 12^h 5^m. Past at 12^h 12^m (?).

February 26.—*Tethys* s. Not up at 10^h 25^m. Up between 10^h 32^m and 10^h 40^m. Past at 10^h 42^m (?).

February 27.—*Tethys* n. Not on line at 9^h 10^m. On between 9^h 15^m and 9^h 20^m.

March 29.—*Rhea* n. Not up at 7^h 53^m. On line between 7^h 55^m and 8^h 5^m. Past at 8^h 10^m.

March 31.—*Tethys* n. Not up at 11^h 15^m. Up between 11^h 20^m and 11^h 25^m. Past at 11^h 30^m.

April 1.—*Tethys* s. Not on line at 10^h 5^m. On between 10^h 7^m and 10^h 12^m. Past at 10^h 15^m.

March 1891.

Occultations of Stars etc.

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April 2.—*Tethys* n. On line between 8^h 50^m and 8^h 55^m. Past at 9^h.

April 16.—*Rhea* n. Not up at 9^h 50^m. Up between 9^h 55^m and 10^h 5^m. Past at 10^h 10^m.

April 17.—*Tethys* n. On line between 11^h 20^m and 11^h 25^m. *Saturn* very low; satellite not well seen.

April 18.—*Dione* s. On line between 8^h 27^m and 8^h 37^m. Not well seen.

Tethys s. Judged on line between 9^h 57^m and 10^h 6^m. Bad sky.

April 19.—*Tethys* n. In conjunction between 8^h 40^m and 8^h 50^m. Planet low.

1890, March 29.—*Rhea* s. Not up at 8^h 35^m. Past at 8^h 43^m.

March 30.—*Enceladus* not seen.

April 2.—*Dione* n. Not up at 8^h 55^m. Past at 9^h 3^m.

Tethys in contact with the ball about 9^h (?). Uncertain.

April 3.—*Tethys* disappeared at the ball about 8^h 50^m.

April 4.—*Tethys*. Saw it well at 7^h 30^m and 7^h 40^m moving up to the ball. Could not see it at 8^h.

April 7.—*Rhea* s. Not up at 9^h 15^m. Past at 9^h 20^m. Could not see *Enceladus* for some time. In conjunction, east, between 12^h 45^m and 12^h 50^m.

April 8.—Watched for the conjunction of *Dione* and *Japetus*. Clouds prevented observation, but saw the satellites 10"± apart about 9^h.

May 13.—*Dione* n. In conjunction about 10^h 15^m

Occultations of stars by the Moon observed with the 9 $\frac{1}{3}$ -inch Cooke refractor. Power 240:—

1887, February 6.—3 *Cancri*. Disappearance 9^h 16^m 32^s, G.M.T.

April 2.—B.A.C. 2,731. Disappearance 9^h 15^m 12^s, G.M.T.

October 24.—θ *Capricorni*. Reappearance 5^h 51^m 31^s, G.M.T.

October 28.—B.A.C. 81. Disappearance 11^h 24^m 7^s, G.M.T.

1888, October 13. 20 *Capricorni*. Disappearance 7^h 7^m 15^s, G.M.T.

1889, January 18.—θ *Libræ*. Disappearance 10^h 50^m 28^s, G.M.T.

February 9.—i *Tauri*. Disappearance 6^h 48^m 41^s, G.M.T. Reappearance 7^h 56^m 39^s, G.M.T.

February 12.—63 *Geminorum*. Disappearance 7^h 47^m 49^s, G.M.T.

1890, April 30.—ν *Virginis*. Disappearance 11^h 53^m 27^s, G.M.T.

August 28.—37 *Capricorni*. Disappearance 11^h 19^m 14^s, G.M.T.